

Environmental Engineers/Consultants

LOMBARDO ASSOCIATES, INC.

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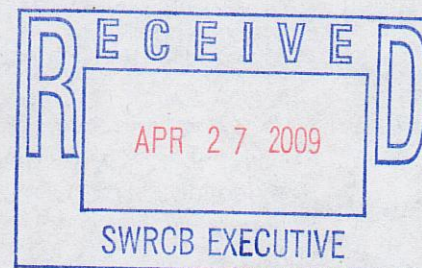
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via e-mail: commentletters@waterboards.ca.gov

April 27, 2009

Tam Doduc, Chair
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100



Dear Chair Doduc and Members of the Board:

Re: Comment Letter
Proposed Statewide Policy
for Water Recycling

In reference to the Draft Mitigated Negative Declaration, regarding the Statewide General Permit for Landscape Irrigation Uses of Recycled Water, the following comments are submitted for your consideration.

In response to the following assertion from page 19:

"The technology, energy, water recycling, and waste management advantages of municipal wastewater treatment far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impact on water quality will be substantially less."

There are numerous small-mid scale wastewater treatment-reuse systems that are highly reliable and produce excellent water quality with a small carbon footprint, as described on the attached Malibu project descriptions. Consequently, it is recommended that the statement be revised or deleted to prevent misinterpretation.

Thank you for taking the time to consider my comments. If you have any questions or concerns, please do not hesitate to contact me at (617) 964-2924 or via e-mail at Pio@LombardoAssociates.com.

Yours truly,

Pio Lombardo
President



PROJECT DESCRIPTION – MALIBU CREEK PLAZA, MALIBU, CA

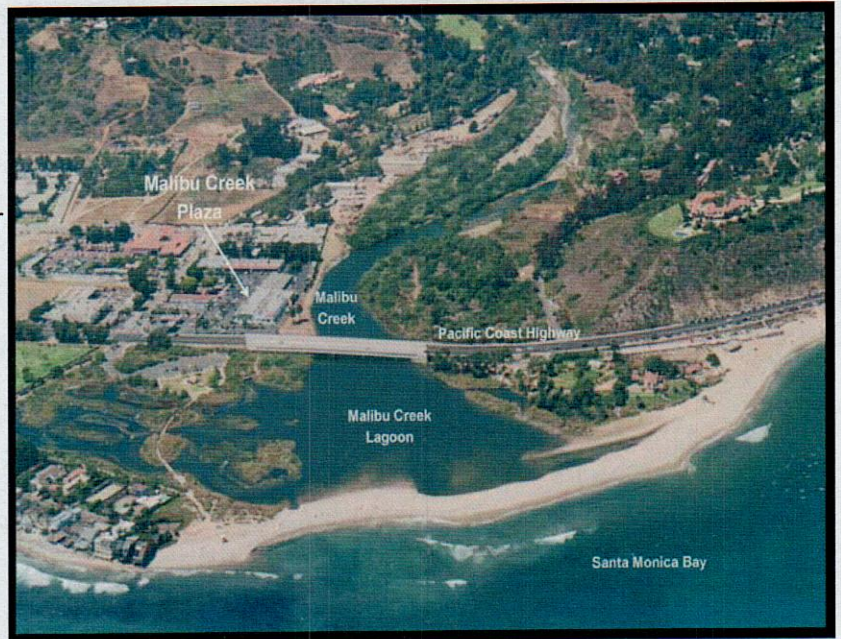
***Producing Water Meeting CA Title 22 Unrestricted Water Reuse Standards
Achieving Total Nitrogen <3 mg/l and Turbidity <1.5 NTU***

Project: Malibu Creek Plaza
Shopping Plaza

Design Flow: 16,000 gpd High Strength
Equivalent to ~40,000 gpd
Residential Strength Wastewater
System – approximately 200
homes

Client: Malibu Creek Preservation Co.
c/o Soboroff Partners

**Wastewater
Engineer:** Lombardo Associates, Inc.
Malibu, CA & Boston, MA
www.LombardoAssociates.com



Project Description.

The Malibu Creek Plaza is a shopping plaza consisting of both retail and commercial businesses. It is located in an environmentally sensitive area adjacent to the famous Surfrider Beach in Malibu, California. In 1999 the California Regional Water Quality Control Board (CRWQCB) and the City of Malibu conducted groundwater and surface water sampling at Malibu Creek Plaza and the nearby area and determined that wastewater discharge from the Plaza and other properties using conventional septic systems were causing groundwater pollution, which adversely impacted Malibu Creek and Malibu Lagoon. The CRWQCB required the Plaza to produce the following tertiary quality wastewater effluent:

Lombardo Associates, Inc. (LAI) was retained to engineer a compliant wastewater management system to protect Malibu Lagoon and Surfrider Beach.

The previous system was a conventional system consisting of grease traps, septic tanks and gravel drainfields, which provided insufficient nitrogen and bacteria removal.

LAI designed a cost-effective wastewater management system that employs a septic tank effluent pump (STEP) collection system and treatment system consisting of the Nitrex™ Nitrogen Removal Technology, recirculating media pretreatment of septic tank effluent, and an ozone – UV disinfection system for bacteria removal. Treated effluent is discharged to new high capacity drainfields. The treatment system was designed to treat 16,000 gpd of the high strength wastewater (equivalent to ~40,000 gpd of residential strength wastewater) as 85% of the flow was from the Plaza's popular restaurants.

The Malibu Creek Plaza Wastewater Treatment System has been operational as of July 2007. The Plaza's wastewater treatment effluent quality is compliant with permit requirements as well as California Title 22 unrestricted water reuse requirements as shown below.

Energy use, 67% of which is for disinfection, of the high strength 16,000 gpd facility (equivalent to 200 - 250 homes) is approximately \$7,400 per year (135 kwhr/day @\$0.15). Operation & Maintenance requirements are monthly visits.



Water Quality Data – Nitrex™ Wastewater System – Malibu Creek Plaza, Malibu, CA

	Constituent	TSS	BOD ₅	Turbidity	Total Coliform	Fecal Coliform	Enterococcus	Oil & Grease	TN
	Units	mg/l	mg/l	NTU	MPN/100 ml	MPN/100 ml	MPN/100 ml	mg/l	mg/l
Malibu Creek Plaza Effluent	Avg	30	30	10.0		-	24	-	
	Max	45	45	15.0		200	104	15	
Title 22 Unrestricted	Avg			2.0	2.2				
	Max			10.0	23				
Aug. 2007		23.0	70.8	25.6*				<5	4.24
Sept. 2007		5.2	<6	1.76	<2	<2	<1	<5	4.75
Oct. 2007		5.0	<7	1.08	<2	<2	<1	<5	3.94
Nov. 2007		<5	<5	0.85				<5	3.23
Dec. 2007		9.0	12.0	1.80	8	2	<1	<5	3.57
Jan. 2008		<5	6.0	1.10	50	<2	<1	<5	4.73
Feb. 2009		<5	<5	5.40	<2	<2	<1	<5	5.61
Mar. 2008		<5	<5	1.90	<2	<2	<1	<5	6.72
Apr. 2008		7.0	<5	2.60	23	23	<1	<5	9.17
May 2008		<5	<5	1.80	1600**	350**	<1	<5	7.88
June 2008		8.0	<5	1.40	22	11	11	<5	15.91
July 2008		6.0	<5	1.40	<2	<2	<1	<5	9.46
Aug. 2008		<5	5.3	1.73	533	140	<1	<5	7.20
Sept. 2008		<5	5.0	4.50	<2	<2	1	<5	7.52
Oct. 2008		<5	<5	1.00	30	<2	<1	<5	3.17
Nov. 2008		<5	<5	3.70	<2	<2	<1	<5	3.74
Dec. 2008		<5	<5	0.20	<2	<2	1	<5	3.54
Jan. 2009		6.0	<5	0.20	23	<2	<1	7	2.68
Feb. 2009		<5	<5	1.45	<2	<2	<1	<5	2.84
Mar. 2009		<5	<5	0.38	5	3.67	<1	<5	2.33
Average from 9/1/07 on		<5	7.1	1.80	87	30	4.3	<5	4.88
Average from 10/1/08 after Operational Adjustments		<5	<5	1.16	9	4	<1	2.5	3.01

Notes: (*) Start-up issue (**) Electrical equipment malfunction

An additional 125 chemicals are analyzed on a monthly basis. All are within permit requirements. All contaminants of concern are below Detection Limits, typically 5 ppb.

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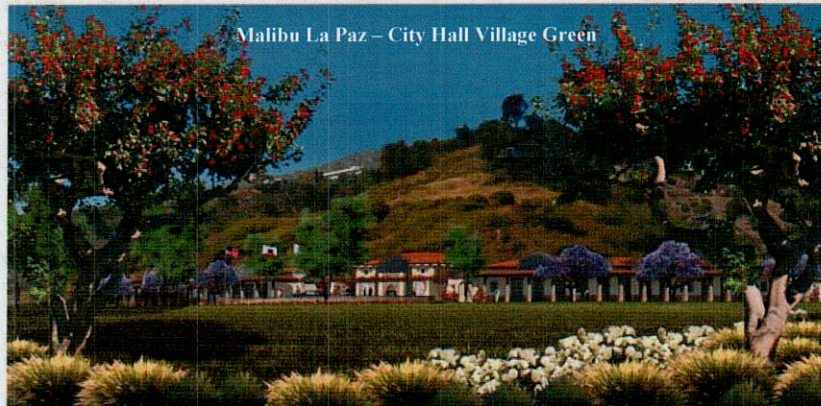
E-mail: pio@LombardoAssociates.com

PROJECT DESCRIPTION – WATER REUSE – NO DISCHARGE SYSTEM MALIBU – LA PAZ DEVELOPMENT MALIBU, CALIFORNIA

Project: La Paz Development
Malibu, CA

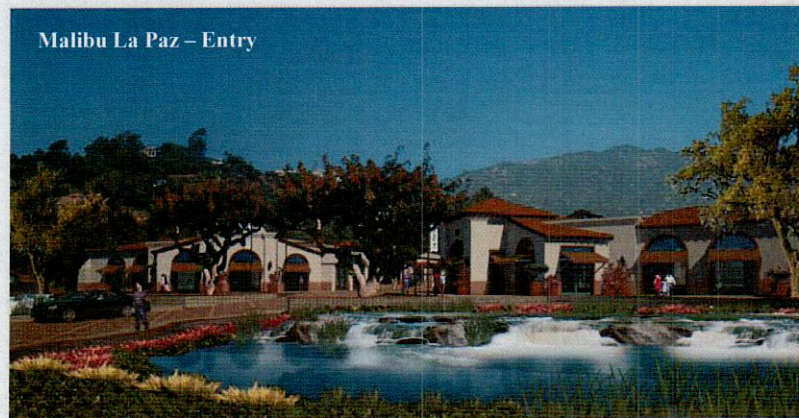
Design Flow: 28,000 gpd / 23,000 gpd

Wastewater Engineer: Lombardo Associates, Inc.
Malibu, CA & Boston, MA
617-964-2924
PIO@LombardoAssociates.com
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Client Reference: Mr. Don Schmitz, AICP
Schmitz & Associates, Inc.
Malibu, CA (310) 589-0773 DonS@schmitzandassociates.net

The La Paz Development, located in an environmentally sensitive area adjacent to the famous Surfrider Beach in Malibu, California, consists of eleven (11) commercial buildings with two restaurants, each with 175 seats, and proposed new City Hall.



The proposed wastewater management water reuse for toilet flushing and landscape irrigation system will have No Discharge from the Wastewater System for the La Paz Development. An effluent storage tank is provided for seasonal periods when wastewater generation is greater than reuse requirements.

The No Discharge is achieved by:

1. In-Building Reuse – Toilet Flushing
2. Landscape Irrigation

An integrated wastewater-stormwater irrigation system will achieve the objective of minimizing water use. Without

the water reuse system, the potable water demand will be 32,200 gpd. With the water reuse, potable water demand will be 14,200 gpd, a 56% reduction, determined as follows:

Without Water Reuse:

In-Building Water Demand =	20,000 gpd
Irrigation =	<u>12,200 gpd</u>
	32,200 gpd

With Water Reuse:

Net In-Building Water Demand =	10,460 gpd
Net Irrigation Demand =	<u>3,740 gpd</u>
	14,200 gpd

A Master Wastewater Management Plan has been prepared to be compliant with Los Angeles Regional Water Quality Control Board (LARWQCB) requirements, California Department of Public Health (DPH) Title 22 Disinfected Tertiary Treatment Standards requirements, and City of Malibu regulations for a Wastewater Management System.

Environmental Engineers/Consultants

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PROJECT DESCRIPTION – RAINWATER HARVESTING & WASTEWATER REUSE – NO DISCHARGE SYSTEM MALIBU – SYCAMORE VILLAGES DEVELOPMENT

Project: Sycamore Villages Development
Malibu, CA

Design Flow: 20,800 gpd / 18,200 gpd

Wastewater Engineer: Pio Lombardo, P.E.
Lombardo Associates, Inc.
Malibu, CA & Boston, MA
617-964-2924
Pio@LombardoAssociates.com
www.LombardoAssociates.com

Client Reference: Mr. David Reznick
Malibu Bay Company
Malibu, CA (310) 456-6555 rez1@earthlink.net



The Sycamore Villages Development, located in an environmentally sensitive area adjacent to the famous Surfrider Beach in Malibu, California, consists of a combination of 65,000 square feet of office and retail space and restaurants with 300 seats.

The proposed rainwater harvesting and wastewater management water reuse for toilet flushing and landscape irrigation system will have No Discharge from the Wastewater System for the Sycamore Villages Development. An effluent storage tank is provided for seasonal periods when wastewater generation is greater than reuse requirements.

The No Discharge is achieved by reusing water for:

1. In-Building Reuse – Toilet Flushing
2. Landscape Irrigation

An integrated wastewater reuse-rainwater harvesting reuse system will achieve the objective of reducing water use by 63%. Without the water reuse system, the potable water demand will be 23,110 gpd. With the water reuse, potable water demand will be 8,500 gpd, determined as follows:

Without Water Reuse:

In-Building Water Demand =	12,970 gpd
Irrigation =	<u>10,700 gpd</u>
	23,670 gpd

With Water Reuse Potable Water Demand:

In-Building Water Demand =	8,400 gpd
Irrigation =	<u>100 gpd</u>
	8,500 gpd

A Master Wastewater Management Plan has been prepared to be compliant with Los Angeles Regional Water Quality Control Board (LARWQCB) requirements, California Department of Health Services (DHS) Title 22 Disinfected Tertiary Treatment Standards requirements, and City of Malibu regulations for a Wastewater Management System.

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